Message

From: Wittstruck, Nathan [Wittstruck.Nathan@epa.gov]

Sent: 12/2/2020 10:29:06 PM

To: Paula Luu [paula@closedlooppartners.com]

CC: Ellen Martin [melonartin@gmail.com]; Cochran, Kimberly [cochran.kimberly@epa.gov]; Vance, Ronald

[Vance.Ronald@epa.gov]; Halloran, Priscilla [Halloran.Priscilla@epa.gov]; Bridge, Jarrod [bridge.jarrod@epa.gov];

Sjogren, Mya [Sjogren.Mya@epa.gov]; Riegerix, Rachelle [Riegerix.Rachelle@epa.gov]

Subject: RE: Question on resources for advanced recycling operations

Hi Paula,

Thanks again for the call today. Here's the link to the SMM Prioritization Tools (https://www.epa.gov/smm/sustainable-materials-management-prioritization-tools). As you'll see, the impacts go well beyond GHG emissions and could be valuable for you to consider what additional impacts you may want to consider when looking at chemical recycling. Jarrod and Priscilla are the experts on this tool, so feel free to reach out to them if you have questions.

Best,

Nathan Wittstruck Office of Resource Conservation and Recovery Environmental Protection Agency 703-308-8408

From: Paula Luu <paula@closedlooppartners.com>

Sent: Tuesday, December 1, 2020 8:51 PM

To: Wittstruck, Nathan < Wittstruck. Nathan@epa.gov>

Cc: Ellen Martin <melonartin@gmail.com>; Cochran, Kimberly <cochran.kimberly@epa.gov>; Vance, Ronald <Vance.Ronald@epa.gov>; Halloran, Priscilla <Halloran.Priscilla@epa.gov>; Bridge, Jarrod <bridge.jarrod@epa.gov>; Sjogren, Mya <Sjogren.Mya@epa.gov>; Riegerix, Rachelle <Riegerix.Rachelle@epa.gov>

Subject: Re: Question on resources for advanced recycling operations

Nathan,

I missed your point on brief background. Here's some information to support our call tomorrow. I lead Closed Loop Partner's (CLP) current research in advanced plastics recycling which builds off our <u>prior work</u> in this space. CLP and a team of technical experts, including Ellen Martin (cc'd here), are helping to analyze different, distinct technology processes in the sector - everything from biological processes that break down plastic to the older technologies like pyrolysis that use thermal heat to depolymerize plastic waste. While evaluating about a dozen companies for this project, we are looking into:

- financial feasibility of the different technology processes
- the environmental impacts associated with different processes
- policy and market incentives that would support commercialization of these nascent technologies
- mapping of plastic packaging waste in the US and Canada (tool published Nov 2020).

The summary of these analyses will be published in a public-facing <u>investor roadmap</u> at the end of a one year study in spring 2021. This is reflected in our agenda, but I'd love to learn the following on our call tomorrow:

- key questions (if any) that EPA currently has surrounding the diverse advanced recycling technologies
- how/if advanced plastics recycling is incorporated in the current national recycling strategy published last month
- how our LCIA research can be integrated to update the WARM model as another end-of-life solution option in the tool. What would you need, data-wise?

Thanks,

Paula

On Mon, Nov 30, 2020 at 10:13 AM Wittstruck, Nathan < <u>Wittstruck.Nathan@epa.gov</u> > wrote:
Thanks Paula,
After looking at everyone's availability, it looks like 4:45-5:30pm on December 3 works best for everyone. Some EPA colleagues may have to join late or drop off early, but I think this works for most of us. I have included the EPA colleagues who should be invited.
Can you send out the meeting invite and include a brief background and agenda topics?
Best,
Nathan Wittstruck
Office of Resource Conservation and Recovery
Environmental Protection Agency
703-308-8408
From: Paula Luu <paula@closedlooppartners.com> Sent: Monday, November 30, 2020 12:28 PM To: Wittstruck, Nathan < Wittstruck.Nathan@epa.gov> Cc: Ellen Martin < melonartin@gmail.com> Subject: Re: Question on resources for advanced recycling operations</paula@closedlooppartners.com>
Hi Nathan,
Thanks for following up. Does December 2nd 1-2 pm still work for the group? Jon suggested we hold 2 separate meetings to dive deeper on each topic. If December 2nd doesn't work, please find a time on my calendar using this link: Schedule a call with Paula
Best,
Paula
On Mon, Nov 30, 2020 at 9:00 AM Wittstruck, Nathan < <u>Wittstruck.Nathan@epa.gov</u> > wrote: Hello Paula,

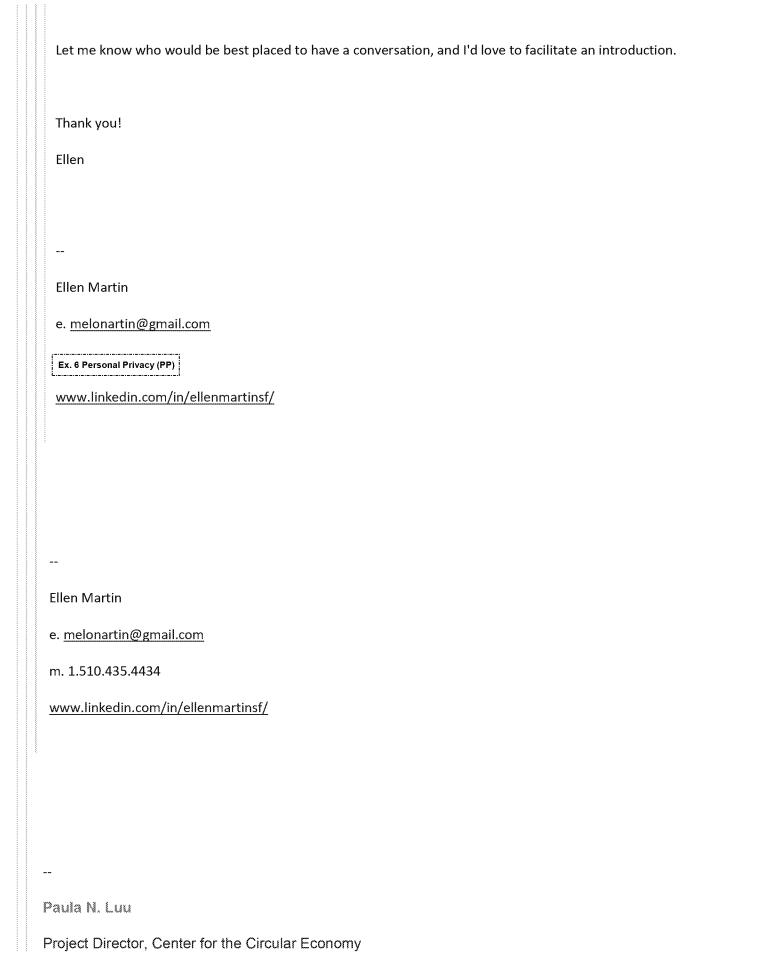
I wanted to follow up with you about this potential meeting. I haven't seen a meeting invitation from you, but I do see that EPA is meeting with Closed Loop Partners on December 3 @ 2-3pm. The Closed Loop Partners on the meeting invite are Jon Powell, Bridget and "AShapiro".
Let me know if this is a separate meeting and you'll be sending a meeting invite soon or if this is a related invite and I can add you to the attendee list.
Best,
Nathan Wittstruck
Office of Resource Conservation and Recovery
Environmental Protection Agency
703-308-8408
From: Wittstruck, Nathan Sent: Thursday, November 5, 2020 3:49 PM To: Paula Luu <paula@closedlooppartners.com> Cc: Vance, Ronald <<u>Vance.Ronald@epa.gov</u>>; Cochran, Kimberly <<u>Cochran.Kimberly@epa.gov</u>>; Bridge, Jarrod <<u>bridge.jarrod@epa.gov</u>>; Halloran, Priscilla <<u>Halloran.Priscilla@epa.gov</u>>; Riegerix, Rachelle <<u>Riegerix.Rachelle@epa.gov</u>>; Ellen Martin <<u>melonartin@gmail.com</u>> Subject: RE: Question on resources for advanced recycling operations</paula@closedlooppartners.com>
Hi Paula, we look forward to the conversation.
It looks like December 2 from 1-2pm EST works best for our team, with December 3 from 1-2pm EST as a backup if December 2 doesn't work.
We'll look for the meeting invite and understand that any documents received are not to be shared.
Best,
Nathan Wittstruck
Office of Resource Conservation and Recovery

703-308-8408
From: Paula Luu <paula@closedlooppartners.com> Sent: Thursday, November 5, 2020 2:11 PM To: Ellen Martin <melonartin@gmail.com> Cc: Wittstruck, Nathan <wirtnersense< td=""></wirtnersense<></melonartin@gmail.com></paula@closedlooppartners.com>
Thanks for the introduction, Ellen. And great to meet you Nathan, Vance, Kimberly, Pricilla, Rachelle, and Jarrod. I'm free from 12-2pm EST anytime from Nov 30th to December 3rd. Is there a day/time there that works with the whole group? I can send a Zoom invite, if so. Will send a pre-read, under embargo, for your review before our meeting.
Looking forward!
Paula
On Thu, Nov 5, 2020 at 1:47 PM Ellen Martin < melonartin@gmail.com > wrote:
Hi all,
It's my pleasure to introduce you to Paula Luu (cc'd). Paula is leading the Closed Loop study and can share more. I'm excited to hear your thoughts on the findings after Thanksgiving. (And shame on me for not realizing that America Recycles day is fast approaching!)
Best,
Ellen

Environmental Protection Agency

On Thu, Nov 5, 2020 at 8:31 AM Wittstruck, Nathan < Wittstruck. Nathan@epa.gov > wrote: Hi Ellen, Thanks for reaching out! There's a lot of interest in the research into advanced recycling, so I've included a small group that would all like to be invited. Due to our office's America Recycles events on November 16-17 (https://www.epa.gov/americarecycles/epas-2020america-recycles-innovation-fair), I think it would be best to meet after the week of Thanksgiving. Can your team meet the week of November 30? If there's anything you'd like us to review in advance, please send it over. We understand if the research is still draft and is not yet ready for sharing. Best, Nathan Wittstruck Office of Resource Conservation and Recovery **Environmental Protection Agency** 703-308-8408 From: Ellen Martin < melonartin@gmail.com > Sent: Wednesday, November 4, 2020 6:59 PM To: Wittstruck, Nathan < Wittstruck. Nathan@epa.gov > Subject: Question on resources for advanced recycling operations Hi Nathan, Thanks for your engagement on the Circulate Capital GHG model. I'm excited to see how the tool evolves in the coming months!

On a totally separate topic: I am advising Closed Loop Partners on an analysis of advanced recycling technologies (i.e., conversion, decomposition and purification), including environmental impacts. We've just completed an environmental and human health impact analysis, and I was wondering if you or someone at EPA would be interested in talking with the Closed Loop team about the findings. I think it would be great to get EPA's perspective on these specific technologies within the framework of US regulation and common measures of environmental and health impacts.



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Paula N. Luu Director, Center for the Circular Economy

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